Octuple 6-bit DAC with I^2C-bus — TDA8444/AT/T

GENERAL DESCRIPTION

The TDA8444/AT/T comprises eight digital-to-analog converters (DSCs), each controlled via the two-wire I^2C-bus. The DACs are individually programmed using a 6-bit word to select an output from one of 64 voltage steps. The maximum output voltage of all DACs is set by the input V_{max} and the resolution is approximately $V_{max}/64$. At power-on all DAC outputs are set to their lowest value. The I^2C-bus slave receiver has a 7-bit address of which 3 bits are programmable via pins A0, A1 and A2.

FEATURES

- Eight discrete DACs
- I^2C-bus slave receiver
- 16-pin DIL package
  16-pin SO package
  20-pin SO package

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_P	Supply voltage		4.5	12.0	13.2	V
I_{CC}	Supply current	no loads; $V_{max} = V_P$; all data = 00	0	12	15	mA
P_{tot}	Total power dissipation	no loads; $V_{max} = V_P$; all data = 00	–	150	–	mW
V_{max}	Effective range of V_{max} input	$V_P = 12V$	1	–	10.5	V
V_O	DAC output voltage range		0.1	–	V_P–0.5	V
V_{LSB}	Step value of 1 LSB	$V_{max} = v_P$; $I_O = –2mA$	70	160	250	mV

PACKAGE OUTLINES

TDA8444 16-lead DIL; plastic (SOT38)
TDA8444T 16-lead SO; plastic (SOT-162)
TDA8444AT 20-lead SO; (SOT-163)